Prof. Gottfried Kirchengast

Born: 14 July 1965, *Nationality:* Austrian

Academic Education:
University of Graz, Austria (Studies 1984–1991).
1st diploma (B.Sc. level) in Physics, Meteorology, and Geophysics, 1986; 2nd diploma (M.Sc. degree) in Geophysics, 1988; Dr.rer.nat. (Ph.D. degree) in the Natural Sciences/Geophysics, 1992; 2nd diploma (M.Sc. level) in Physics, 1995. (all graduations with highest honors)

Experience and Expertise: *(for more information please see www.uni-graz.at/gottfried.kirchengast)*

1992-present	***Professional Development.*** Assist. Prof. UniGraz (1992) and part time Max-Planck Postdoc fellow at MPI for Aeronomy, Lindau/Harz (1992-1994), Foundation/Direction of the ARSCliSys Group at UniGraz (1996–), Venia docendi Geophysics (1997), Assoc. Prof. (1997), Visiting scientist at MPI-M Hamburg (1998), Awarded "START Preis 1998" for basic research on "Advanced spaceborne sounding and climate modeling for atmospheric change analysis" (1998) ["START" and "Wittgenstein" prizes, the awardees being selected by an international Jury after stringent peer review, are Austria's most prestigious and best endowed discretionary research fund awards], Awarded the "Josef-Krainer Würdigungspreis 1999" for exceptional performance in the field of Meteorology and Geophysics (1999), Visiting scientist at UCAR Boulder, MPI-M Hamburg, IAP/Univ. of Arizona Tucson, and GFZ Potsdam (summers 1999-2002), Lead Investigator, together with P. Hoeg (DK), of the ACE+ satellite mission (2002–2004), Full Professor (2003–) at UniGraz Geophysics Chair (Alfred Wegener's Chair, 1924-1930), Foundation (2003-2004) and Director of the Wegener Center (2005–), GRAWE Award 2006 for exceptional research and leadership in the field of climate change, Member/Lifetime-Member of the Austrian Academy of Sciences (2008/2011–).
1988-present	***Research.*** Since 1996 focus on atmospheric remote sensing from space and use for climate research. Interests include occultation methods (like GNSS radio occultation and LEO-LEO occultation) and other coherent-signal and spectroradiometric methods (in infrared and microwave), with the main aim to conceive and advance methods and algorithms and to provide optimal climate utility of such data. Since 2005 also work on ground-based methods with very high resolution for climate applications (e.g., realization of the WegenerNet climate station network). Climate research interests include analysis of atmospheric change, validation and improvement of climate modeling by accurate observational constraints (climate benchmark data), climate change detection and attribution, and integrated climate analysis from global to local scale. Methodological interests behind include advanced physical and statistical modeling, including forward, adjoint, and inverse modeling as well as data assimilation, for simulations and optimal estimation in complex systems (e.g., parts of the climate-socio-economic system). Before 1996 research focus was on the physics of the upper atmosphere including on thermosphere-ionosphere interactions, ionospheric weather modeling, 3D modeling of the ionosphere-plasmasphere system, and ionospheric tomography. Author/Co-author of more than 80 peer-reviewed articles (ISI) and more than 150 further scientific articles and reports, and of several books.
1992-present	***Teaching.*** Delivering university lectures, seminars, and privatissima on many topics of geophysics, meteorology, physics, modeling and data analysis methodology, and environmental systems sciences. Supervision of M.Sc. and Ph.D. students on a wide variety of topics. More than 25 Ph.D. students (with theses finished by summer 2011) and 30 M.Sc. students have been given guidance to successful completion since 1992.
1994-present	***Leadership.*** Director of the Wegener Center at UniGraz (~40 scientists) and of its Climate and Environmental Change Research and Monitoring Programme (~25 scientists), Head of the ARSCliSys Research Group (~12 scientists), and Head of Geophysics & Meteorology at IGAM/Institute of Physics/UniGraz. Leader of many international and national research projects or of the UniGraz participation in them (with funds from ESA, EU, Austrian Space Applications Programme, Austrian Science Fund, etc).
1992-present	***International Services.*** Member of many international scientific societies, bodies and panels. Scientific meeting organizer, reviewer, evaluator, and consultant in many international contexts and projects.

Languages: German, English, some French